CLAIMS

1.   A shopping pattern analyzing system comprising:

a tag attached to a shopping cart and having mobility

corresponding to a shopping consumer;

a plurality of readers for reading information of the tag

through local area radio communication and transmitting the read

information through a network;

an analysis module for analyzing a shopping pattern of the

consumer from the information of the tag read by the readers;

a database in which the information of the tag and analysis

data of the analysis module are stored;

a system server for managing the analysis data of the analysis

module by performing communication with the readers, and

controlling the analysis module and the database; and

a monitoring terminal for receiving a result of the analysis

for the shopping pattern from the system server and displaying

the received result of the analysis.

2.   The shopping pattern analyzing system according to claim 1,

further comprising a wired/wireless terminal installed at an

entrance and exit spot of a store for identifying a card on which

consumer information is recorded,

wherein the shopping pattern analyzing system manages a

shopping profile of the consumer using a combination of the consumer

information and the tag information.

3.   The shopping pattern analyzing system according to claim 2,
further comprising a consumer terminal for receiving information
5   on a shopping expectation zone of the consumer and information
on goods of interest in a relevant zone, which are analyzed by
the analysis module.

4.   The shopping pattern analyzing system according to claim 1,
10   further comprising a plurality of POS terminals for settling goods
shopped by the consumer,
        wherein the shopping pattern analyzing system manages a
shopping profile of the consumer using a combination of the consumer
information and the tag information, which are used for settlement.

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5.   The shopping pattern analyzing system according to claim 1,
wherein the analysis module includes:
        a consumer location detecting unit for detecting a location
of the consumer in a store corresponding to a location of the tag
20   according to a signal from the tag sensed by the readers and storing
information on the detected location of the consumer in the
database;
        a shopping time checking unit for checking a term during which
the consumer stays in the detected location in the store, determines
25   the term as stay shopping time in a relevant zone if the consumer

stays in the relevant zone for preset threshold time, and storing

the stay shopping time in the database; and

a shopping traffic line tracing unit for tracing a shopping

traffic line of the consumer in association of the consumer location

5   information and the stay shopping time information in the relevant

zone and storing the shopping traffic line information in the

database.

6.   The shopping pattern analyzing system according to claim 5,

10   wherein the analysis module further includes:

a preference zone analyzing unit for calculating preference

of the relevant zone using stay shopping time of the consumer for

each zone and shopping information on goods in the relevant zone

and storing the calculated preference in database; and

15   a shopping pattern analyzing unit for analyzing profile

information of the consumer, shopping particulars of the consumer,

and the shopping traffic line information, which are stored in

the database, grouping the shopping pattern of the consumer for

each item of the consumer profile, inferring shopping patterns

20   for different consumers having similar profile information, and

storing a result of the inference in the database.

7.   The shopping pattern analyzing system according to claim 5,

wherein the analysis module includes:

25   a shopping profile analyzing unit for generating or updating

a shopping profile of the consumer with reference to the consumer
information and shopping history of the consumer and shopping
history of a consumer group related to the consumer, which are
stored in the database, analyzing the generated or updated shopping

5   profile, and storing a result of the analysis in the database;
and

a potential information predicting unit for providing goods
recommendation information individualized with reference to goods
shopping particulars of the consumer, the shopping traffic line

10   information, the shopping profile, and zone preference, which are
stored in the database, to a consumer terminal carried by the
consumer.

8.   The shopping pattern analyzing system according to claim 5,

15   wherein the threshold time is calculated by subtracting an average
of moving time of the consumer in the relevant zone from an average
of stay shopping time for each relevant zone, and is defined between
maximal stay shopping time and minimal stay shopping time, which
are spent in each zone when relevant zone goods are shopped actually.

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9.   The shopping pattern analyzing system according to claim 5,
wherein the shopping traffic line information is grouped for each
profile of the consumer, and the grouped shopping traffic line
information is stored in the database.

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10.   The shopping pattern analyzing system according to claim 6,

wherein the preference of the relevant zone is calculated by

multiplying a ratio of the number of goods shopped in a certain

zone in the store to the number of goods shopped in all zones in

5   the store by a ratio of stay shopping time of the consumer for

each zone to total shopping time of the consumer, and is corrected

using a shopping goods weight and a shopping time weight.

11.   The shopping pattern analyzing system according to claim 10,

10   wherein the shopping goods weight is calculated by a radio of the

quantity of goods shopping in the relevant zone during a specified

term including a final point of time of shopping for goods that

have ever been shopped in the store to the overall quantity of

goods shopping in the relevant zone.

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12.   The shopping pattern analyzing system according to claim 10,

wherein the shopping time weight is calculated by a radio of goods

shopping time in the relevant zone during a specified term including

a final point of time of shopping to overall goods shopping time

20   in the store during the specified term including the final point

of time of shopping.

13.   The shopping pattern analyzing system according to any one

of claims 5 to 12, wherein the shopping traffic line tracing unit

25   traces and analyzes shopping traffic lines of individual consumers

and hourly, daily and monthly shopping traffic lines of all consumers, and displays a result of the analysis through the monitoring terminal.

5   14.   The shopping pattern analyzing system according to any one of claims 5 to 12, wherein the shopping traffic line tracing unit analyzes shopping congestion in each zone in the store and displays the analyzed shopping congestion through the monitoring terminal.

10   15.   The shopping pattern analyzing system according to any one of claims 5 to 12, wherein information on the shopping traffic line and the shopping pattern of the consumer is calculated and analyzed, and a result of the analysis is displayed as a graph and quantitative real data values through the monitoring terminal.

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16.   A shopping pattern analyzing method comprising the steps of:
        detecting a location of a consumer in a store corresponding to a location of a tag according to a signal from the tag sensed by a reader and storing information on the detected location of
20   the consumer in a database;
        checking stay shopping time in a relevant zone in which the location of the consumer is detected and storing the checked stay shopping time in the database;
        tracing a shopping traffic line of the consumer in association
25   of the consumer location information and the zone in which the

stay shopping time is generated and storing the traced shopping traffic line information in the database;

analyzing zone preference of the consumer from the stay shopping time information and goods information, which are stored in the database, and storing the analyzed preference in database;

analyzing a shopping pattern of the consumer from the shopping traffic line information, the stay shopping time information, and the goods information, which are stored in the database, and storing a result of the analysis in the database; and

generating or updating shopping profile information of the consumer and storing the generated or updated shopping profile information in the database.

17.   The shopping pattern analyzing method according to claim 16, wherein the stay shopping time is determined to be stay shopping time in a certain the relevant zone if it is checked whether a term during which the consumer stays in the certain zone exceeds preset threshold time.

18.   The shopping pattern analyzing method according to claim 17, wherein the threshold time is calculated by subtracting an average of moving time of the consumer in the relevant zone from an average of stay shopping time for each relevant zone, and is defined between maximal stay shopping time and minimal stay shopping time, which are spent in each zone when relevant zone goods are shopped actually.

19. The shopping pattern analyzing method according to claim 16, wherein the zone preference is calculated by multiplying a ratio of the number of goods shopped in a certain zone in the store to the number of goods shopped in all zones in the store by a ratio of stay shopping time of the consumer for each zone to total shopping time of the consumer, and is corrected using a shopping goods weight and a shopping time weight.

20. The shopping pattern analyzing method according to claim 19, wherein the shopping goods weight is calculated by a radio of the quantity of goods shopping in the relevant zone during a specified term including a final point of time of shopping for goods that have ever been shopped in the store to the overall quantity of goods shopping in the relevant zone.

21. The shopping pattern analyzing method according to claim 19, wherein the shopping time weight is calculated by a radio of goods shopping time in the relevant zone during a specified term including a final point of time of shopping to overall goods shopping time in the store during the specified term including the final point of time of shopping.

22. A shopping pattern analyzing method comprising the steps of:
registering consumer information in a database when a consumer enters a store;

detecting a location of the consumer in the store corresponding to a location of a tag according to a signal from the tag sensed by a reader and storing information on the detected location of the consumer in the database;

5   determining whether or not stay shopping time of the consumer in a certain zone in the store exceeds preset threshold time;

searching for a shopping profile of the consumer stored in the database if it is determined that the stay shopping time exceeds the preset threshold time;

10   determining whether or not a current stay shopping zone is included in the shopping profile of the consumer;

selecting a preference zone of the consumer from the shopping profile information of the consumer if it is determined that the current stay shopping zone is included in the shopping profile

15   of the consumer;

transmitting information on the preference zone and information on goods of interest of the consumer in the preference zone to a consumer terminal; and

adding information on a relevant moving zone to the shopping

20   profile of the consumer stored in the database.

23.   The shopping pattern analyzing method according to claim 22, wherein the registration of the consumer information is achieved by a wired/wireless terminal installed at an entrance and exit

25   spot of the store for identifying a card on which the consumer

information is recorded in a contact or non-contact manner.

24.   The shopping pattern analyzing method according to claim 22, wherein the threshold time is calculated by subtracting an average of moving time of the consumer in the relevant zone from an average of stay shopping time for each relevant zone, and is defined between maximal stay shopping time and minimal stay shopping time, which are spent in each zone when relevant zone goods are shopped actually.